

**Strategy for Improving Water Quality Compliance**  
**From**  
**Concentrated Animal Feeding Operations**

**Montana Department of Environmental Quality**

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## List of Acronyms

AFO	-	Animal Feeding Operation
ARM	-	Administrative Rules of Montana
BAT	-	Best Available Technology Economically Achievable
BMP	-	Best Management Practice
CAFO	-	Concentrated Animal Feeding Operation
CFR	-	Code of Federal Regulations
CNMP		Comprehensive Nutrient Management Plan
CWA	-	Clean Water Act
DEQ	-	Department of Environmental Quality
DFWP	-	Department of Fish, Wildlife and Parks
DNRC	-	Department of Natural Resources and Conservation
EA	-	Environmental Assessment
ENFD	-	DEQ, Enforcement Division
EPA	-	Environmental Protection Agency
EQIP	-	Environmental Quality Incentive Program
ER	-	Enforcement Request
FTE	-	Full Time Employee
HUC	-	Hydrologic Unit Code
MCA	-	Montana Code Annotated
MDA	-	Montana Department of Agriculture
MDL	-	Montana Department of Livestock
MDMB	-	DEQ, Monitoring and Data Management Bureau
MPDES	-	Montana Pollutant Discharge Elimination System
NHCP	-	National Handbook of Conservation Practices
NRCS	-	Natural Resource Conservation Service
PCD	-	DEQ, Permitting and Compliance Division
PPAD	-	DEQ, Prevention, Planning and Assistance Division
RDGP	-	Resource Development Grant Program
RIT	-	Resource Indemnity Trust
RPPB	-	DEQ, Resource Protection Planning Bureau
SRFP	-	State Revolving Fund Program
SWCD	-	Soil and Water Conservation District
TFAB	-	Technical and Financial Assistance Bureau
TMDL	-	Total Maximum Daily Load
USDA	-	United States Department of Agriculture
WMP	-	Waste Management Plan
WPB	-	Water Protection Bureau

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## **Introduction**

In September 1998 the US Environmental Protection Agency (EPA) and the US Department of Agriculture (USDA) jointly issued a draft national strategy for reducing the environmental and public health impacts associated with water pollution from animal feeding operations (AFOs). The EPA finalized the national strategy in March of 1999. Also in March 1999 the EPA Office of Enforcement and Compliance Assurance issued a Compliance Assurance Implementation Plan for Concentrated Animal Feeding Operations (CAFOs). The Montana Department of Environmental Quality (DEQ) has responded to the EPA compliance initiative by developing a corresponding strategy for Montana in accordance with the requirements of the Compliance Assurance Implementation Plan. Although progress has been made in controlling pollution from factories and sewage treatment plants, storm water runoff from agricultural activities, including storm water runoff from AFOs, continues to degrade the environment and puts drinking water supplies at risk. According to state water quality assessments, 40 percent of the nation's waterways do not meet goals for fishing and swimming. The goal of the EPA/USDA strategy is for AFO owners and operators to take actions to minimize water pollution from livestock confinement facilities and from land application of manure. To accomplish this goal, the EPA/USDA strategy establishes a national performance expectation that all AFOs should develop and implement, by 2008, technically sound and economically feasible Comprehensive Nutrient Management Plans (CNMPs) to minimize impacts on water quality and public health.

The strategy for Montana contains eight components to address the control of pollution from AFOs. The strategy components listed below are derived from a list of 11 suggested commitments each state must address in developing its own strategy.

- ✦ Prioritizing watersheds for AFO compliance
- ✦ Providing assistance and incentives for AFO compliance
- ✦ Compliance coordination with federal, state and local governments and agencies
- ✦ Describing enforcement authority
- ✦ Processing complaints of AFO water quality impacts and enforcement
- ✦ Targeting AFOs for inspections
- ✦ Scheduling of AFO inspections
- ✦ Monitoring AFO compliance

Each of the following sections describes a single strategy component, explains how it relates to Montana's current AFO compliance program, if appropriate, and describes how Montana's AFO compliance strategy will correspond with the EPA Compliance Assurance Implementation Plan for Concentrated Animal Feeding Operations and the EPA/USDA national strategy.

### **I. Prioritizing Watersheds for AFO Compliance**

The EPA and USDA encourage the states to use existing watershed assessment processes to focus AFO compliance efforts. Several efforts are ongoing in Montana to focus water quality improvement activities on a watershed basis. The most significant is an effort by the Planning, Prevention and Assistance Division (PPAD) of DEQ to determine the level of water pollution control or habitat improvement that will achieve the water quality standards or restore beneficial uses for an impaired water body. This level of pollution control or habitat improvement is referred to as the Total Maximum Daily Load (TMDL) for the pollutants of concern.

The Montana Water Quality Act [75-5-703, MCA] requires DEQ to establish TMDLs for point and nonpoint sources for streams or lakes that fail to meet water quality standards or support their beneficial

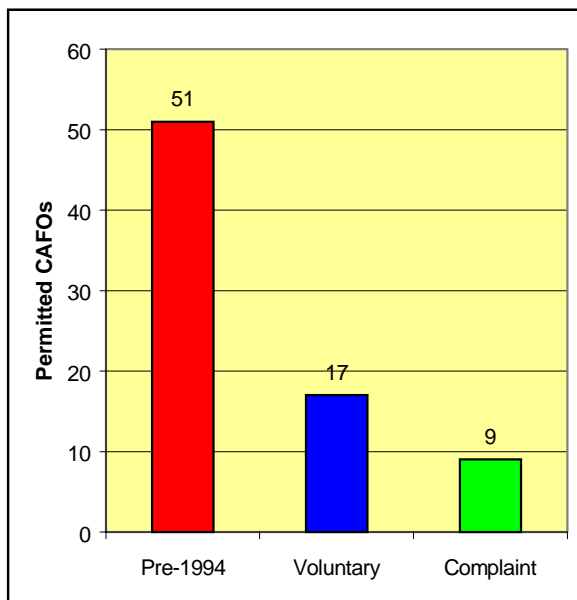
uses. The TMDL process considers future growth and development in establishing these limits and then adds a margin of safety to its calculations. TMDLs consider pollution from all point and nonpoint sources, including discharges from industrial plants and sewage treatment facilities, runoff from farms, forests and urban areas, as well as natural sources such as decaying organic matter or nutrients in soil. The process requires knowledge of both the amount of a pollutant that enters the water naturally and the amount that enters the water from discharges and runoff. The quantities of pollutants allowed from all sources are balanced so that the total amount does not exceed the limits necessary to support the beneficial uses designated for the water body.

## A. Current Program Priorities

Currently 71 AFOs operate under permits from the Permitting and Compliance Division (PCD) of DEQ. Figure 1 illustrates three categories for these permittees. Fifty-one facilities were permitted prior to the current general permit term that began in 1994. These were generally voluntary applications reviewed and approved as received by the former Department of Health and Environmental Sciences. Five of these operations have since terminated operations. The remaining two categories represent the operations that obtained a permit during the current permit term. Seventeen of these applications were submitted voluntarily; the remaining nine operations obtained permits after they became the objects of complaints.

**Figure 1. Process categories for current CAFO permits**

The Department staff and financial limitations preclude a comprehensive field inventory of AFOs. The



Department does not, therefore, have comprehensive information on the total number and location of Montana's AFOs. A limited industry survey, conducted by a Department contractor in 1993, identified 86 AFOs having at least 250 beef cattle, 200 dairy cattle, 850 swine or an equivalent livestock combination capable of producing a daily minimum of 85 pounds of nitrogen. The area of the operations ranged from 2 to 160 acres. Thirty percent of the contractor-identified animal confinement operations had surface water within 500 feet. There is potential for some runoff from operations of this size in most years. The contractor estimated that there are approximately 150 such operations in the state. The contractor data suggest that about half of the larger operations that require permits have submitted applications. Although resources are limited for a comprehensive inventory, the Department's complaint processing and surface

water assessment efforts will continue to identify livestock operations that need to implement water quality protection practices.

There are two ways in which the Department becomes involved in a AFO compliance case: 1) a Department response to a third party complaint; and 2) review of a permit application submitted voluntarily by an AFO owner or operator. Within each scenario, priorities are set according to severity of the actual or potential discharge.

## **B. Permitting Priorities under Montana's Strategy**

Under Montana's strategy, priorities for AFO compliance permit processing and complaint response will be integrated into ongoing Department watershed priorities. The TMDL process will assess the degree of water body impairment. An advisory group will help the Department develop a method of ranking the degree of impairment into categories of high, moderate or low priority. Using a TMDL approach for water bodies does not replace existing water pollution control programs or standard treatment technologies. It provides a framework for evaluating pollution control efforts and provides for closer agency coordination in meeting local water quality goals.

Montana will implement the TMDL process in three phases. Phase I will continue the Department's existing policies of issuing grants to local projects addressing impaired or threatened waters; submitting project implementation plans to EPA for approval; refining data quality and use assessment criteria; and conducting education and outreach. Coordination with federal and state land management agencies will also be critical for developing TMDLs. Phase II will be the completion of the database management system, new water body ranking system and revised list of impaired waters. Phase III is expanding the TMDL process to new watershed groups and fostering the creation of new groups of landowners on impaired water bodies that lack TMDLs.

A second effort to identify priority watersheds is the Department's implementation of the Clean Water Action Plan. On February 14, 1998, the EPA and the USDA presented a Clean Water Action Plan to Vice President Al Gore. The purpose of the plan is to identify the watersheds with the most critical water quality concerns and apply accelerated technical and financial resources for water quality and natural resource conservation in these watersheds. The plan for Montana is adaptive in that changing social and environmental considerations will continue to affect priorities with each year of implementation. The long-term plan proposes a process of identifying local needs first and organizing watershed assistance programs around these needs.

The eight-digit hydrological unit codes (HUC) that label individual watersheds are used in developing the unified assessment. The primary factors for categorizing watersheds into four groups are: 1) the presence of an impaired water body; or 2) participating agency knowledge of restoration needs for water bodies within the watershed. The presence of coinciding state and federal watershed management activities is a second watershed ranking criterion.

In Montana, priority watersheds are identified by the number of projects being sponsored by state and federal agencies. Any watershed listed as a priority by one agency or more is classified by the total number of agencies involved; a "Level 3" watershed is one named by three agencies as a high priority. During a public comment period, local watershed groups and local governments will identify watersheds for attention. The Department will prioritize its AFO complaints and permitting efforts according to watersheds identified by the TMDL and Montana's Clean Water Action Plan processes as being impaired because of nutrient, sediment or pathogen problems attributable to animal manure or wastewater. The AFO compliance effort will be further focused on AFOs having more than 1,000 animal units and on

AFOs that may be threatening drinking water supplies. There will continue to be complaint cases where the severity of a discharge will require a shift in program attention outside of the priority watersheds. Permit application processing will continue for watersheds throughout the state, but Clean Water Action Plan watersheds will be given priority.

Some AFOs that are voluntarily implementing a CNMP or other corrective action may have a discharge that makes them subject to the MPDES permitting program but does not cause them to be a permitting priority. The Department will provide an opportunity for all AFOs to voluntarily address the cause of their discharges in a timely manner before designating the facilities as CAFOs and requiring a permit application. In addition, the Department has requested EPA funding that may be available to assist in a more thorough inventory of Montana AFOs and their compliance status.

## **II. Providing Assistance and Incentives for Voluntary AFO Compliance**

Montana's AFO compliance strategy has voluntary as well as regulatory components. Farmers and ranchers are primary stewards of many of Montana's natural resources and have worked to improve water quality in the past. They are expected to be voluntary partners with the Department in implementing measures to protect public health and the environment. Opportunities for financial and technical assistance in achieving voluntary AFO compliance are available from the Department, and the Department is a valuable source of information on assistance and incentives available from other state agencies. Fundamentally, if voluntary efforts can eliminate discharges to state waters, no direct regulation is necessary through a permit.

### **A. Current Technical and Financial Assistance Programs**

The PCD staff is the primary technical provider of compliance assistance for CAFOs. Through the permitting process, the staff works with AFO owners, operators and private engineering consultants to design management systems for animal wastes. The opportunity for voluntarily cooperation between PCD staff and parties responsible for AFO operations has been an incentive for resolving most compliance cases.

Voluntary compliance is enhanced if the regulated community understands the legal discharge limitations and is aware of the options for proper waste handling and treatment. The Division staff is available to explain the regulatory program for CAFOs to water resource advisory groups, landowner groups and livestock trade organizations. Individuals with questions about the program can call the PCD Water Protection Bureau (WPB) at (406) 444-3080. The PCD has produced, and continues to distribute to the public, written educational guides on animal waste management that promote water quality protection.

Field investigations are ongoing by PCD staff to answer questions about waste discharge effects on soil and ground water nitrogen concentrations. Permittees have cooperated in two studies to measure the soil nitrogen distribution beneath open confinement lots and measure ground water nitrogen concentrations near waste storage ponds. The results are distributed to the cooperating permittees and developed as educational materials.

The Department encourages local citizen participation in controlling watershed pollution sources. The DEQ, PPAD provides technical and financial assistance to land and water resource groups, including AFO owners and operators, to improve water quality protection while maintaining economic viability. The PPAD staff includes economists, computer scientists, engineering specialists, water quality specialists, aquatic biologists and meteorologists with technical backgrounds in natural resource planning, financing and data acquisition.

The PPAD, Resource Protection Planning Bureau (RPPB) includes a watershed management section that provides technical and financial assistance to crop and livestock organizations, soil and water conservation districts (SWCD), watershed advisory groups and water pollution control districts. They assist to identify water quality, stream bank and riparian zone problems and to develop, implement, and evaluate the effectiveness of water pollution control plans. The RPPB also has responsibility for development of water quality criteria and standards that affect the CAFO permitting program. The RPPB provides guidance to the WPB on making significance determinations for water quality degradation and applying the non-degradation standard. The PPAD also includes a Monitoring and Data Management Bureau (MDMB) that maintains the Clean Water Act, Section 303 (d) list of impaired water bodies not meeting water quality standards or achieving beneficial uses. Surface water quality information available from MDMB is used to identify impaired water bodies and make TMDL determinations. The PPAD also assists landowners, SWCDs, water pollution control districts and watershed advisory groups on development and implementation of local water quality controls. The controls may be precautionary or voluntary or they may be permit limitations. For nonpoint sources, specific Best Management Practices (BMPs) are applied to meet water quality standards or restore beneficial uses.

Financial assistance available through the Watershed Management Section of PPAD is focused on lakes and streams that have been identified by the Wetlands Grant Program [Clean Water Act (CWA) Section 104-(b) (3)]. The purpose of the Wetland Grant Program is to assist state, tribal and local government agencies in wetland protection. Conceivable projects relating to AFOs would be those reducing nutrient loading to wetlands. Grant funds can be used for projects that demonstrate a direct link to improving wetland protection. Grants are available to state, tribal and local governments and agricultural agencies dealing with wetlands. Eligible projects may include wetland and watershed protection and restoration demonstration projects, river corridor and riparian wetland restoration projects as well as watershed scale assessments to identify priority restoration sites.

Section 319 of the Clean Water Act (CWA) created a grant program to address nonpoint source pollution. The DEQ and EPA administer the program. Grants under CWA Section 319 are provided to the states for management of the "base" nonpoint source program and for implementation projects to address nonpoint problems. Competitive projects can be in one of three general categories: watershed, information and education and ground water. Eligible applicants include federal, state and local organizations, and other nonprofit groups. SWCDs often sponsor projects because of their local water pollution control interests. There are no specific funding limitations. However, the program requires a detailed budget outlining annual and total costs for each task proposed, and costs must be well justified. Grants in the past have ranged from about \$30,000 to \$150,000. In general, up to 60 percent of project costs can be funded by 319 funds. The remaining 40 percent of the money must come from non-federal sources. The Department is available to assist the applicant with the application process. The principal contact is Stuart Lehman of the PPAD, Watershed Management Section. He can be reached at the following address and phone number: Montana Department of Environmental Quality, PO Box 200901, 1520 East Sixth Avenue, Helena, MT 59620 or telephone (406)-444-5319.

The PPAD, Technical and Financial Assistance Bureau (TFAB) administers Montana's Water Pollution Control State Revolving Fund Program (SRFP). The program offers below-market loans for construction of public health-related infrastructure improvements. An Intended Use Plan for the funding is prepared annually for submittal to EPA. This plan lists eligible projects in Montana ranked according to funding priority, discusses methods of financing these projects and sets target goals for loan commitments. Twenty percent of the program funding is available for nonpoint source projects that may include AFOs.



Several grant and loan programs administered by the Montana Department of Natural Resources and Conservation (DNRC) can potentially be a source of financing to improve water quality affected by livestock concentrations. Most of these programs require sponsorship by a public entity, such as a SWCD or other local government organization, and an application for funding is more commonly submitted on behalf of several landowners affecting a single water body or watershed. Brief descriptions of the relevant funding programs are given in Appendix 1. In addition, the DNRC provides grant administration services to DEQ for the Section 319 and SRF grant programs.

## **B. Montana's Strategy for Providing Compliance Incentives**

The Department recognizes that a viable livestock industry is essential for the economic stability of many rural communities. The majority of the agricultural community is interested in protecting and improving water quality by implementing practical methods of converting a potential source of water pollution into a resource that contributes to improved soil fertility and plant nutrition. Both technical and financial incentives to achieve compliance for AFOs will focus on water bodies selected for TMDL development.

Ground water assessments will continue at 12 facilities having monitoring requirements as part of their discharge authorizations. The goal in such assessments will be to determine when remediation of past discharges is complete and to determine the need and specifications for long-term monitoring.

To resolve questions regarding interfering pollutant source the Department will initiate specific field investigations as needed and as staff and financial resources allow. A work plan has been drafted for a study to identify sources of ground water nitrogen where interfering concentrations may be contributed by agricultural nonpoint and residential sources. Implementation of the work plan is contingent upon funding.

The Department will continue to distribute written educational guides on animal waste management and to discuss livestock pollution control with the public. The development of wetland restoration plans and wetland monitoring programs will remain a high priority for the PPAD.

The SRFP will continue to offer funding for activities related to public health and compliance with the Safe Drinking Water Act. Future Section 319 funding will encourage projects that restore water bodies on Montana's impaired waters list (303d list) and result in the development of water quality restoration plans. The Department encourages watershed projects that demonstrate new or innovative approaches that produce information that can be transferred to other areas of the state. The Department will continue to be available to livestock owners and operators seeking technical compliance assistance and assistance in preparing funding applications.

## **III. Compliance Coordination with Federal, State and Local Governments and Agencies**

The EPA and the Natural Resources Conservation Service (NRCS) are the principal federal agencies working with DEQ toward AFO compliance. The EPA role has been predominantly regulatory. The NRCS has provided technical solutions to specific waste management problems. The Montana AFO compliance strategy will continue to recognize these roles. The strategy clarifies EPA and NRCS interaction with the Department on AFO compliance. There are limited opportunities for DEQ coordination with other state agencies on AFO compliance specifically. The Department frequently refers AFO owners and operators to local conservation district offices for resource planning assistance. DEQ is available to the Departments of Livestock and Agriculture to provide permitting and compliance information to their staff and outside associates.

## **A. Past EPA Involvement in the Montana AFO Program**

On June 10, 1974, the EPA delegated the authority to Montana for administration of the MPDES permits program. Since delegation, EPA grants have been the principal funding source for DEQ's permitting programs including CAFO permitting. The EPA reviews the draft MPDES general permit, cooperates on joint inspections and exercises permit authority on tribally owned lands.

## **B. Future EPA-DEQ Coordination under the National Strategy**

In its national CAFO strategy, EPA has committed to assisting Montana in evaluating its CAFO permitting efforts and reviewing Montana's strategy for consistency with the national strategy and the Compliance Assurance Implementation Plan. EPA has also committed to working with DEQ to develop performance measures that track AFO permitting and compliance and ensures that EPA enforcement priorities complement the Montana strategy. Notwithstanding this cooperative function, EPA may initiate enforcement action at any facility at any time under the Agency's authority to address imminent and substantial endangerment. DEQ anticipates an increased level of EPA oversight and emphasis on more frequent inspections and development of waste management plans (WMPs) for larger AFOs in watersheds where nutrients are impairing water uses. Additional funding is periodically available from EPA for short-term technical research and information gathering activities and contracted services to assist the Department's limited staff with inspections and permit tracking. The Department will respond to such funding availability by identifying program shortfalls that could be helped by short-term funding increases. The Department has requested EPA funding for inventory efforts.

## **C. Working Relationship between NRCS and DEQ for Improving AFO Compliance**

The NRCS is the principal public source of technical expertise for soil and water conservation planning. Historically, the NRCS has assisted both AFO and CAFO owners and operators in developing waste management systems. Past cooperation between NRCS and PCD has focused primarily on individual compliance projects. For such cases in the future, NRCS will encourage the AFO owner or operator to contact DEQ for a site inspection to determine the need for a permit. The need for a discharge permit is dependent on the physical setting of the operation and the potential for a continuing discharge.

The site inspection by the Department is the forum for clarifying the regulatory requirements for the owner, discussing waste management options and setting enforceable compliance schedules. If the Department determines, after an inspection, that corrective action is required, the Department requests a written commitment from the owner or operator to develop and complete a compliance plan within a reasonable and specific time frame. Depending on the severity of the discharge, the compliance schedule may be allowed to coincide with available NRCS technical assistance or federal cost share funding cycles. If the operator fails to commit to and implement the compliance schedule, the case may be processed as an enforcement action.

The NRCS provides technical assistance to AFO owners and operators as requested to develop conservation plans. Montana's strategy will use the technical advice of the NRCS for voluntary CNMP development. When the NRCS develops a CNMP with a cooperator, NRCS will recommend that the draft plan be submitted to the Department for preliminary review. The Department will apply water quality standards, seepage specifications and the federal effluent limitations to plan reviews. The Department is responsible for assuring that the NRCS staff applies the appropriate effluent limits and performance

standards when developing CNMPs. Voluntary cooperation with the NRCS and the timely development and implementation of a CNMP will preclude enforcement by the Department.

The NRCS has financial and educational assistance programs available to producers to address animal waste and treatment system components under the Environmental Quality Incentives Program (EQIP) the Small Watershed Program and other programs (see Appendix 1). The Department supports NRCS incentive programs that apply cost-effective soil and water conservation practices in compliance with environmental laws. Priority areas for Montana's Clean Water Action Plan will, in part, consider NRCS incentive program priorities.

The National Handbook of Conservation Practices (NHCP), and the Field Office Technical Guide maintained by NRCS, contain standards for over 150 conservation practices, many of which apply to livestock waste management. The Department recognizes that the NHCP and the Technical Guide establish the minimum levels of acceptable quality for planning, installing, operating and maintaining conservation practices. The Department will review draft national practice standards pertaining to animal waste management. The agencies will meet periodically to evaluate practice standards and design criteria for compatibility with current regulations.

#### **D. Compliance Coordination with State Agencies**

The Montana Department of Agriculture (MDA) and DEQ share administration of the Montana Agricultural Chemical Ground Water Protection Act. The statute has not created a need for AFO compliance coordination between the agencies in the past. Land availability for animal waste applications in most Montana settings has minimized the need for close interagency coordination to control pollution from animal waste as a fertilizer.

MDA administers the Montana Fertilizer Act and the Montana Commercial Feed Act. The laws require licensing and registration of products being sold or distributed as fertilizer or animal feed. Composted animal waste is a potential commercial fertilizer. The authorization letter issued by the Department to a CAFO owner or operator marketing such products will inform them of their responsibility to correctly label the product and guarantee ingredients through a MDA-approved program, including analytical testing. While the MDA does not administer programs that directly target AFOs, the agency is willing to participate in the Department's educational efforts. MDA field staff at eight field offices around the state is in frequent contact with the agricultural community and meets regularly with farm and ranch groups that include livestock owners.

The Montana Department of Livestock (MDL) requires game farm operators to establish quarantine facilities for temporary holding of livestock for communicable disease control. Quarantine areas may have conditions defining them as AFOs. The Department staff has accompanied MDL staff on inspections of quarantine areas at game farms to suggest operational changes to eliminate potential discharges from quarantine areas. The Montana compliance strategy promotes joint inspections with MDL staff when necessary.

The Montana Department of Fish, Wildlife and Parks (DFWP) prepares environmental assessments (EAs) for proposed game farms that may affect local water quality. The Department has reviewed the EAs and prescribed siting or waste disposal stipulations to eliminate discharges to state waters. The Department staff has also been asked by DFWP to explain the CAFO regulations at public hearings or informational meetings focusing on a single game farm proposal. Under the compliance strategy the Department staff will continue to be available to DFWP in this capacity.

## **E. Coordination with Local Agencies**

County health authorities and their staff sanitarians are important contacts through which the Department communicates CAFO compliance requirements to livestock owners. Sanitarians are often called upon to validate CAFO complaints and direct local permitting questions to the Department. Periodic assistance is also needed from city and county commission offices to identify short-term, waste management options. The availability of local wastewater treatment systems may broaden disposal options in some cases.

SWCDs have taken an active role in public education by sponsoring training meetings and field workshops to explain regulations affecting livestock owners. Conservation districts have also sponsored grant and loan applications seeking funding for animal waste management projects in watersheds with larger livestock densities. Some SWCDs are taking voluntary measures to educate operators about sound manure and wastewater management.

Montana's compliance strategy will foster relationships with local waste management jurisdictions by responding to inspection requests when Department staff are available, copying local authorities on inspection reports and correspondence and resolving case-by-case compliance issues with the sanitarians or other local officials.

The voluntary component of the Department CAFO compliance strategy will continue to support the role of the SWCDs by informing them of PCD activities in their districts, assisting with informational meetings and workshops and reviewing funding applications that seek to reduce point source and nonpoint source pollution from CAFOs.

## **IV. Describing Enforcement Authority**

This component describes the statutes and regulations that apply to AFOs and describe proposed changes in permit requirements. The three major changes to the permit program are described: the requirement for WMPs; clarification of the effluent limit; and permit fee requirements.

### **A. Existing Regulatory Framework for AFOs**

Discharges of pollutants to Montana state waters are governed by the Montana Water Quality Act [75-5-101 *et seq.*, MCA] administered by DEQ. The Act requires adoption of technology-based discharge limits when published by EPA. The Administrative Rules of Montana (ARM) 17.30.1201 *et seq.* establish the Montana Pollutant Discharge Elimination System (MPDES) permit program. Permits issued under the MPDES program specify effluent limitations and treatment requirements for point sources discharging to state waters. A CAFO is defined in the Clean Water Act as a point source of pollution. Discharges from CAFOs, therefore, require a permit. The state rules governing CAFO discharges are contained in ARM 17.30.1330.

The current MPDES program includes a five-year, general permit for CAFOs. The wastes generated by Montana's AFOs are assumed to be similar enough to justify a single general permit. The permit contains discharge limits, waste disposal requirements, special conditions that provide for proper animal waste management and reporting requirements. The following paragraphs describe these limits and requirements.

An AFO is a lot or facility having both of the following conditions:

- 1) Animals have been, are, or will be stabled, confined and fed or maintained for a total of 45 days or more in any 12-month period;
- 2) Crops, vegetation forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the facility.

An AFO is a CAFO when:

- ◆ it contains more than 1,000 animal units;
- ◆ it contains between 301 and 1,000 animal units and a discharge occurs through a man-made conveyance; or pollutants are discharged directly into state waters which originate outside of the facility and pass over, across or through the facility or;
- ◆ designated as a CAFO on a case-by-case basis by the Department.

One animal is not always equal to an “animal unit” because different classes of livestock generate different amounts of waste. The term “animal unit” is used to standardize the waste-generating potential of different livestock classes. A slaughter or feeder steer is one animal unit. A dairy cow is 1.4 animal units because dairy cattle produce more waste than slaughter or feeder cattle.

The discharge limit is defined as the best available technology economically achievable (BAT) for CAFOs. The BAT limitation in the permit specifies that “a discharge of pollutants to state surface waters may only occur whenever rainfall events, either chronic or catastrophic, cause an overflow from a facility designed, constructed, and operated to contain all process generated wastewaters plus the volume of runoff that would result from a 25-year, 24-hour, rainfall event.” Except for such an overflow, all wastewaters must be contained or otherwise prevented from entering state waters.

The permittee is required to notify the Department of any discharge of surface water runoff within 24 hours. The notification must report the discharge date, duration, cause, estimated volume, name of receiving water, visible effects and corrective action taken. The precipitation recorded at the site or official gauge station must also be reported for discharges resulting from precipitation. In addition, the permittee is required to sample any discharge, planned or unplanned, which has the potential to reach state surface water. The analytical results of the discharge must be submitted to the Department within 28 days of the event.

The general permit also addresses discharges to ground water. A legal discharge of pollutants to state ground waters may only occur when the quality of the receiving ground water, affected by seepage or leachate from a CAFO, does not exceed applicable standards. Ground water monitoring near waste collection or storage facilities or land application sites may be required to verify the integrity of storage pond liners or detect the affects of land application. Because monitoring systems vary with local conditions, ground water monitoring requirements are not specified in the general permit. The requirements are specified in the permittee's authorization letter. The possible suite of monitored parameters includes pH, total dissolved solids, fecal coliform, nitrate plus nitrite as nitrogen, ammonia nitrogen, organic nitrogen and soluble phosphorus. Monitoring requirements are more likely in areas with shallow ground water or having coarse-textured sediments in the unsaturated zone above the water table.

The general permit also contains performance standards to control discharges from land areas used for manure application. Annual land application rates cannot exceed crop/vegetative uptake rates for nutrients. Wastes from feed, bedding, veterinary supplies and pest and parasite control must be isolated from state waters.

The Montana regulations governing MPDES permits [ARM 17.30.1341 (9)] provide for the issuance of an individual permit rather than a general permit in certain cases. Such cases include a determination by the Department that the discharge is a significant contributor of pollution and violations of the permit conditions. **Livestock owners and operators should understand that without an actual or potential discharge of pollutants from a CAFO to state surface or ground waters, there is no requirement for a permit.**

Section 605 of the Montana Water Quality Act describes prohibited activities that may apply to AFOs. It is unlawful to cause pollution of any state waters or to place wastes in a location where they will cause pollution. A discharge that would cause water quality standards to be exceeded is defined as pollution [75-5-103 (25) MCA]. It is also unlawful to discharge sewage, industrial waste, or other wastes into any state waters without a current permit. "State Waters" is defined as a body of water, irrigation system, or drainage system, either surface or underground; except irrigation waters where the waters are used up within the irrigation system and the waters are not returned to any other state waters [75-5-103 (25) MCA]. The term identifies what is protected under the statute. The specific standards that apply to a surface water body or to volume of ground water depend upon its ambient quality. For example, the applicable standards are more stringent for "high quality waters." High quality waters means all state waters except:

- ◆ ground waters classified as of January 1, 1995, within the "III" or "IV" classifications established by the board's classification rules; and
- ◆ surface water that are not capable of supporting any one of the designated beneficial uses for their classification or surface waters having no surface expression for more than 270 days during most years (75-5-103 (10) MCA).

The general CAFO permit, which was issued on July 11, 2000 and expires on July 31, 2005. The previous general permit expired on June 30, 1999 but remained in force until reissuance. Permit reissuance is a component of Montana's CAFO compliance strategy. After redrafting and circulation within the Department, the draft permit and statement of basis was given public notice for 90 days. The Department held two public hearings on the permit. Because of the dispersed nature of the permitted discharges, compliance with the Montana Environmental Policy Act [75-1-101 et seq. MCA] is achieved through an EA prepared for the process of general permit issuance. Individual EAs will be completed for each discharge authorization depending on site-specific factors such as the source and scale of the discharge and proximity to state waters.

## **B. Proposed Changes to the Existing Regulatory Program**

The following changes to the general permit are proposed as part of this strategy:

1. Modified to require that all CAFOs having more than 1,000 animal units develop and implement a waste management plan.
2. The effluent limit statement clarified by eliminating reference to the "like amount of precipitation falling during any 15 day period."
3. The monitoring and reporting requirements clarified to state that any discharge must be sampled and clarify record retention requirements.
4. Clarify provisions for the payment of application and annual fees.

## **1. Waste Management Plans (WMP)**

The goal of this compliance strategy and the CAFO permit program is to encourage all AFO owners and operators to take actions to achieve BAT for confinement facilities and land application areas. Waste management planning is the proposed means of achieving this goal. Although nitrogen and phosphorus are the major pollutants of concern in livestock wastes, WMPs should address risks from other pollutants, such as pathogens and sediment. WMPs are site-specific and address the goals and needs of the individual owner or operator, as well as soil and crop conditions. Development and implementation of WMPs will be the responsibility of the CAFO operator. While WMPs are encouraged for all AFOs, the plans will be requirements for permitted CAFOs having greater than 1,000 animal units.

At a minimum, a WMP must address the following elements:

- ◆ Manure collection, transport and storage
- ◆ Clean water diversion
- ◆ Contaminated runoff control
- ◆ Land application of wastes or other waste treatment methods
- ◆ Minimizing erosion losses from land application areas
- ◆ Record keeping

Clean water must be diverted from contact with lots, holding pens or stored manure. Clean water includes rainfall runoff from roofs and adjacent lands and irrigation water. Manure handling and storage must prevent water pollution and minimize odors. Construction and maintenance of buildings, collection and conveyance systems and storage facilities must prevent leakage of organic matter, nutrients and pathogens to ground or surface water. Runoff from solid manure exposed to precipitation must be contained to meet BAT. Liquid manure storage structures must be appropriately sized and constructed. Location of manure storage systems must maximize the distance to surface water and depth to ground water. Dead animal disposal methods must not adversely affect ground or surface water or create public health concerns.

Land application is the most feasible method of realizing the plant fertilizer value of livestock wastes. Nutrient management means balancing soil nutrients with those applied in manure and other fertilizer materials. It requires crop yield goal determinations and corresponding nutrient requirements, soil testing and manure testing. An acceptable WMP must prevent manure application at rates exceeding the crop and soil capacity to assimilate nutrients. The timing and method of application should prevent the loss of nutrients to surface or ground water.

The land management component of a WMP addresses cropland runoff control, crop residue management, grazing management and other conservation practices that minimize movement of soil, organic materials, nutrients, and pathogens from land application areas to surface and ground water.

The permittee is required to retain records and document the following information:

- ◆ Number and types of livestock generating the waste
- ◆ The mass and volume of waste produced
- ◆ The mass and volume of waste applied
- ◆ Nitrogen and phosphorus concentrations of the wastes as applied
- ◆ The location, acreage and crop cover of the application area
- ◆ The location, quantity, and method of disposal for wastes not land applied

- ◆ The location, quantity, and method of disposal for all wastes disposed off site.

Records must be retained for a minimum of three years.

In watersheds where the potential for environmentally sound land application may be limited, the WMP must identify alternative uses of manure, such as the sale or distribution to other farmers or composting. All manure utilization options should be designed and implemented to comply with BAT. The Department encourages development of WMPs that are flexible and innovative in manure and nutrient management.

The Department actively encourages composting as part of a WMP and is in the process of changing the rules relating to the licensing and operation of compost facilities. These changes will clarify the requirements for compost operations, eliminate the need for licenses for many agricultural composters and provide no-cost licenses for most of the CAFO composters. Under current regulations, corporations who compost manure or farm waste are required to obtain a license from the Department and pay a license fee. The proposed changes will allow all composters (including corporate farms and feedlots) of farm and barn waste generated on-site, to be included in the no-cost licensing program. The proposed rules are currently under staff review and are anticipated in final form this year.

Large composters are those who produce more than 1,000 tons a year, use more than 10,000 cubic yards of feedstock, occupy more than 2 acres with compost piles or who compost diverse feedstocks or municipal solid waste or sewage sludge. Large composters are required to obtain a license and pay annual fees to the Department.

The focus of the proposed composting regulations is to provide environmental protection while minimizing the regulatory burden. The Department will continue active outreach and educational programs for composters of all types and sizes. Assistance as needed is also available from certified industry staff, private consultants and agency specialists.

## **2. Effluent Limit Clarification**

The effluent limits in the permit state that "A discharge of pollutants to surface waters of the state may occur whenever rainfall events, either chronic or catastrophic, cause an overflow of process wastewater from a facility designed, constructed, and operated to contain all process generated wastewaters plus the runoff from a 25-year, 24-hour, rainfall event for the location of the CAFO."

The limit in the code of federal regulations [40 CFR 412.13] makes no reference to the 15-day storm duration. The limit simply states that there shall be no discharge of process wastewater to navigable waters. The limit further states that process waste pollutants in an overflow may be discharged whenever rainfall events, either chronic or catastrophic, cause an overflow from a facility designed, constructed and operated to contain all process generated wastewater plus the runoff from a 25-year, 24-hour rainfall event for the location of the CAFO. The current wording extends the period for recording the amount of precipitation in the 25-year, 24-hour storm. This would allow discharges resulting from precipitation events that are less than the 25-year, 24-hour storm if that amount accumulates or occurs intermittently over a 15-day period. The 15-day clause would allow discharges resulting from smaller storms in violation of federal regulations for CAFOs.

The statement of the effluent limit in the permit should be in its simplest form to clarify the requirement and to avoid the confusion that continues to surround its interpretation. As a result, the 15-day time period allowance for precipitation accumulation in the 1994 general permit has been removed.



The numerical standards for nitrate nitrogen and fecal coliform in ground water are levels deemed to be protective of human health.

### **3. Payment of fees**

In 1993 the Montana State Legislature passed legislation, now codified in Section 75-5-516 of the Montana Water Quality Act, to provide funding through a "user pays" fee system in order to maintain permit programs in Montana. The Montana Board of Environmental Review has adopted the rules [ARM 17.30.201] that implement the fee provisions. The rules contain schedules of application fees and annual fees that will provide enough revenue to fund the legislature-approved budgets for the Departments permit-related programs. A \$200.00 application fee is due with each application the Department receives. By rule, the Department cannot process permit applications until the application fee has been received. The fee rules also provide for an annual fee of \$250.00 that is assessed at the beginning of each calendar year.

## **V. Processing AFO Complaints and Enforcement**

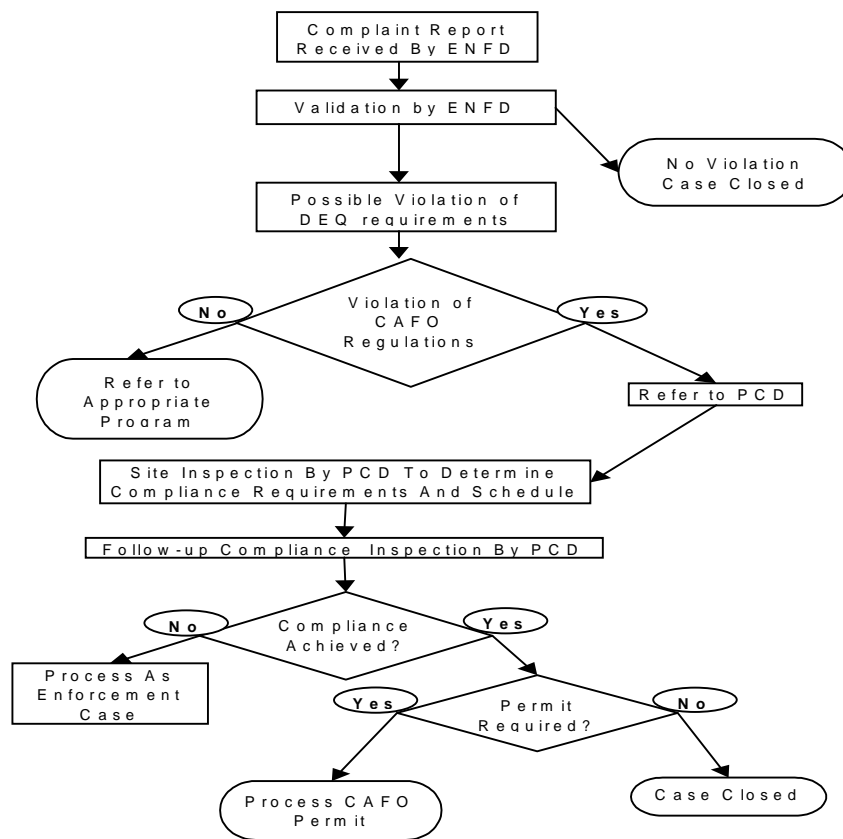
Thirty-three percent of the permit applications received by the Department during the last five-year permit cycle were submitted as part of compliance plans stemming from third-party complaints. The PCD's role in the regulatory program focuses on permit issuance and compliance tracking; the Department's Enforcement Division (ENFD) functions to receive, refer and track third party complaints and manage non-compliance cases requiring enforcement. The Department's current complaint processing procedures will continue to be implemented as part of this AFO compliance strategy. A detailed description of these and all ENFD procedures is contained in the Enforcement Response Manual dated October 1999. Copies are available from the Department's ENFD.

Telephone complaints are entered on a standardized complaint form by Department staff to record location, timing, type and amount of pollutant, responsible party and efforts made to remedy the situation. Complainant names may be kept confidential. Hard copies of completed complaint forms are submitted to the Complaints Management Section of the ENFD at P.O. Box 200901, Helena, MT 59601-0901. Complaints received by other state agencies, either by telephone or hard copy, are also forwarded to the Complaints Management Section. The ENFD is responsible for validating all third-party complaints. This requires an on-site visit by ENFD staff. Upon validation the ENFD staff may refer the complaints to the PCD. The PCD staff contacts the responsible party and schedules an inspection. The inspection documents the degree of non-compliance and provides a forum for discussion of possible solutions to eliminate the discharge or otherwise meet the BAT requirement. Information gathered during the inspection regarding the discharge volume, duration, frequency and proximity to state waters is used to determine whether the responsible owner or operator of the AFO must apply to the Department for authorization to discharge under the general permit. Figure 2 illustrates how the Department processes third party CAFO complaints. The standard complaint form is available for use by any state agency receiving a complaint regarding an AFO. All complaints originating at other state agencies are similarly referred to the Complaints Management Section of the ENFD by phone, fax or regular mail.

Complaint inspections are followed up by a violation letter, as required by 75-5-617 (2) MCA, from the PCD to the owner or operator, citing the statute and rule violations, requiring compliance and identifying consequences of non-compliance. A written commitment to achieve compliance is required from the responsible party and a compliance schedule is specified, a clean up order may be required as authorized by 75-5-601, MCA. Failure to respond to the violation letter with a commitment to comply is cause for enforcement actions that include a notice of violation, administrative order or judicial action as specified in the Montana Water Quality Act [75-5-617(1),MCA].

Both the PCD and the ENFD track the open complaints. Active referred complaints are closed by the ENFD, at the request of PCD, when compliance is achieved. The tracking of complaints that result in CAFO permits remains the responsibility of the PCD. Both divisions close complaint files in which the discharge is completely eliminated. Cases of chronic non-compliance or failure to meet compliance schedules will result in an enforcement action and an enforcement request (ER) is completed. ER forwarded to the ENFD are reviewed for completeness. Complete ERs are sent to the Director for consideration; and he, consultation with the ENFD administrator, will either deny or approve the ER. Upon the Directors approval the Department's ENFD will proceed with an enforcement action. If the ER is denied, it will be returned to the originating division administrator with a written explanation for the denial. The ENFD will continue with the enforcement action and consult with PCD by either issuing a draft administrative order within 90 days from receipt of the Director's approval of the ER; or filing a judicial complaint in district court within 90 days. The Department's enforcement action will typically require scheduled corrective actions and an appropriate penalty.

**Figure 2. CAFO complaint management protocol**



## VI. Targeting AFOs for Inspections

### A. Current Targeting Priorities

Under the current program inspections are conducted in response to complaints and inspection requests by AFO owners wanting to know the compliance status of their existing or proposed operations. Inspection requests from owners and operators using NRCS assistance in priority watersheds will receive the highest

priority because NRCS staff carry the largest share of design work for managing livestock wastes. Such inspections are at the owner's request. The NRCS will not request Department inspections of AFOs.

Owners requesting inspections are usually of larger operations and are distributed widely across the state in close proximity to surface waters. These requests are generally prioritized higher than complaint inspections because PCD attention to voluntary compliance efforts sends a positive message to the regulated community. Voluntary compliance effort says the Department is willing to take extra measures to help those willing to inform themselves of the requirements and solve their own waste control problems. Individual CAFO owners' requests for inspections outside of priority watersheds may receive a lower priority.

The CAFO program has an average of from 15 to 20 unresolved third party complaints referred to PCD by the ENFD. Livestock numbers and severity of the alleged discharge are factors used to prioritize these cases. The WPB is improving expeditious complaint response by assigning 0.50 of a FTE to AFO inventory and complaint response with EPA funding.

## **B. Targeting Priorities under the Strategy**

Under the Montana CAFO strategy, unannounced inspections of larger CAFOs, both existing and proposed, will be given highest priority. Complaint response will be prioritized by Montana's Clean Water Action Plan identifying watersheds with impaired surface water uses due to sediment and nutrients. Complaints against operations with greater than 1,000 animal units will receive first attention within targeted watersheds. Facilities with greater than 1,000 animal units produce quantities of manure that are a larger risk to water quality and public health regardless of management. A spill while handling manure or a breach of a storage system can release large quantities of manure and wastewater into the environment. Land application of large volumes of waste requires more careful planning to avoid water quality problems.

The second priority will target facilities having 1,000 animal units or less with "unacceptable conditions" that poses a significant risk of water pollution or public health problems. These are facilities that have man-made conveyances that discharge animal waste to waters or have a direct discharge to waters that pass through the facility or come into direct contact with animals or animal wastes. The PCD is hopeful that most AFOs having unacceptable conditions will voluntarily rectify those conditions to avoid the requirement to obtain a permit.

The third priority targets CAFOs with 1,000 animal units or less that are contributing to aggregate water quality impacts within a single impaired watershed. The TMDL watershed assessment processes will be used to determine whether such a collection of AFOs is causing or contributing to impairment. Inspections and permitting will become a priority in watersheds where impairment due to sediment, nutrient or pathogen problems attributable to livestock wastes is documented by the assessment process. In addition, where the PCD has evidence that an individual AFO or group of AFOs significantly contribute to non-attainment of the designated use of an individual water body, these AFOs will become a priority for permit issuance.

The three AFO categories described above will receive priority for inspections. Within each group, those in Clean Water Action Plan priority watersheds will be inspected first. Incoming complaint referrals will be screened, and validated complaints against AFOs in these categories will become higher priorities for inspections and permitting. Cooperation with NRCS staff on permitting policy development remains an important issue. The Department will continue to participate in cooperative inspections with NRCS staff as needed to resolve permitting policy questions that may arise in specific cases.

## **VII. Inspection Scheduling**

At the current staffing level (a portion of 1.5 FTE), the Department is able to complete approximately 35 CAFO inspections per year. Fifty percent (17) of these inspections will be of permitted facilities. In an average year, six of these inspections will be CAFOs having 1,000 animal units or greater.

It is reasonable to expect that the current number of unpermitted CAFO inspections, as a percentage of all CAFO inspections, will remain at about 50 percent. This reflects the number of unannounced inspections that result from third-party complaints and the number of requests for inspections by those voluntarily submitting new permit applications. The number of announced inspections is due to voluntary requests for pre-construction inspections of proposed CAFOs. The Department will continue this inspection service because it provides an opportunity to advise owners of siting criteria that may prevent the possibility of a discharge and the associated requirement for a permit. Even when permits are ultimately required, the pre-construction inspection is an opportunity to educate livestock owners about regulatory requirements and develop waste management plans that prevent operations from becoming the objects of future complaints.

An effort is underway to increase the number of full-time employees addressing CAFO compliance. The Department has requested EPA funding that may be available for contracted services to inspect the largest CAFOs now holding permits. Also, the Department's legislative request for a compliance specialist would provide a portion of an FTE to share the workload. These services would also help to update the system of compliance tracking. Training for inspection staff is important. The permitting staff will attend a maximum of two training or information exchange opportunities per year to allow the staff to engage specialists familiar with CAFO issues developing around the country.

## **VIII. AFO Compliance Monitoring**

Under this compliance strategy, the Department will maintain the current system of tracking the compliance of permitted CAFOs that have been inspected by PCD staff. Compliance is assessed during inspections and documented in inspection reports. Instances of non-compliance on permitted facilities discovered during inspections are addressed by a violation letter to responsible parties and subsequent enforcement response options as described above for third party complaint response. Compliance status is described in an electronic document file for each inspected CAFO covered by a permit. Monitoring frequency, compliance points, parameter concentrations and reporting dates are listed in a series of tables for CAFO permittees submitting water quality monitoring results. Raw monitoring data is entered into permit-specific spreadsheet files to determine significant changes and trends in receiving water quality. The Department will also continue to maintain files on non-permitted CAFOs that are currently completing compliance plans. In some of these cases, the decision to require a permit is deferred until plan implementation is complete and the discharge potential can be evaluated.

Measures of success in implementing this strategy will be established. Since the goal is to minimize water pollution from confinement facilities and land application areas, performance is best measured by the numbers of cases in which corrective action occurs as a result of Department inspections, compliance tracking and permitting. Such actions can be placed into five broad categories:

- 1) Issuance of a MPDES permit that includes a WMP for a CAFO having greater than 1,000 animal units and having an actual or potential discharge;
- 2) Inspection of a permitted CAFO having 1,000 or more animal units;

- 3) Initiation of a compliance plan for CAFOs having 1,000 animal units or less with man-made conveyances discharging animal waste to waters or having a direct discharge to waters that pass through the facility or come into direct contact with animals;
- 4) Issuance of a MPDES permit for a CAFO having 1,000 animal units or less and having an actual or potential discharge;
- 5) Resolution of compliance case for a small animal feeding operation where the resolution eliminates the need for permit coverage.
- 6) Each action will typically require an inspection, permit application review or several written correspondences from the Department in the process of resolving a case. Performance will be measured as the number of CAFO cases in each category receiving review by the Department that result in either coverage under the general permit, a WMP being put in place or a case being resolved without the need for a permit. Measurement of progress will take time because appropriate measures take time to develop and take time to affect water quality. These evaluation criteria can be further developed to encompass other program functions such as education outreach or measurable reductions of nutrient or sediment loads to surface and ground water.

**References:****Clean Water Action Plan:**

Montana Department of Environmental Quality. September, 9, 1999, *Clean Water Action Plan: Assessment of Montana's Watershed Restoration Need(draft)*. Helena: Montana Department of Environmental Quality.

Available on the DEQ home page at <http://www.deq.state.mt.us/ppa/>

**General Permit for Concentrated Animal Feeding Operations:**

Montana Department of Environmental Quality. 2000. *General Discharge Permit Concentrated Animal Feeding Operation MT-G010000*. Helena: Montana Department of Environmental Quality.

## Appendix 1

### DNRC Funding Programs Relevant for AFO Owners and Operators

The **Renewable Resource Development Grants** program funds water quality, forestry, resource education, waste management and other projects related to renewable resources. Projects must enhance the common well being of Montana residents through the conservation, management, development or protection of a targeted renewable resource. Applications are submitted in May of even-numbered years. The grant limit is \$100,000.

The **Reclamation and Development Grants Program** (RDGP) is a state-funded grant program designed to fund projects that indemnify the people of the state for the affects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana [90-2-1102, MCA]. The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county or other political subdivision or tribal government within the state may apply for a RDGP grant. The funding source for this program is interest income from the resource indemnity trust (RIT) fund and mineral taxes. Grants of up to \$300,000 are available per application, and a total of \$3 million in grant funds is available each biennium.

The **Conservation Districts "223" Grant** program provides up to \$10,000 quarterly for any project sponsored by a Montana conservation district under its authority. Funds are used to correct stream bank erosion and sedimentation problems; administer new technology; and conduct water development and management projects, youth and adult educational activities, and equipment rental programs.

The **Watershed Planning Assistance Grants** program was authorized by the 1997 legislature. The purpose is to assist conservation districts and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts and incidental costs associated with watershed planning.

The **Private Grants** financial assistance program is available to any individual, association, partnership or corporation (both for-profit and nonprofit). The legislature allocated \$100,000 for private grants. By law, grant funding for a single project may not exceed 25 percent of the total estimated cost. Most of the funds are targeted to assist small, privately owned water systems.

**Range Improvement Loans** are available on an on-going basis to private landowners for fencing, seeding, stockwater development and other range improvement practices. The loan limit is \$35,000 at 4 percent interest. Private water development loans are available on an on-going basis to landowners for projects that conserve, distribute, develop and use water for beneficial uses. Project examples include new and renovated irrigation systems, lining or consolidating ditches and irrigation system automation.

**Private Loans** for water development projects are available from the DNRC. Loans to individual private entities may not exceed the lesser of \$200,000 or 80 percent of the fair market value of the security given for the project. Private loans to individuals must be secured with real property. Loans up to \$300,000 are now available for organizations with multiple shareholders, such as water user associations and ditch companies.

### USDA Funding Programs Relevant for AFO Owners and Operators

The **Environmental Quality Incentives Program** (EQIP) is administered by the United States Department of Agriculture - Natural Resources Conservation Service (NRCS). EQIP was authorized by the 1996 Farm Bill to address agriculture's priority natural resource and environmental problems. EQIP is a voluntary conservation program utilizing long-term contracts to help producers implement conservation practices and systems identified in a conservation plan approved by NRCS and local conservation districts. Under EQIP, USDA can provide cost-share assistance to family-sized farms and ranches for up to 75 percent of the costs of certain environmental protection practices, such as grassed waterways, filter strips, manure management facilities, capping abandoned wells and wildlife habitat enhancement.

The continuous **Conservation Reserve Program** (CRP) sign-up provides annual rental payments to landowners for a 10-15-year period. Cost sharing is available to help install conservation buffers (filter strips, grassed waterways, field windbreak shelterbelts, etc.), mainly on cropland. Buffers filter pollutants borne by soil, water and air. Under the program's "marginal pastureland provision," landowners are eligible to enroll environmentally sensitive grazing lands along streams or around lakes and permanent wetlands.

The **Small Watershed Program** works through local government sponsors and helps participants solve natural resource and related economic problems on a specific watershed. Project purposes include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, fish and wildlife habitat enhancement, wetlands creation and restoration and public recreation in watersheds of 250,000 or fewer acres. Both technical and financial assistance is available.

For more information on these programs, contact your local USDA Service Center, listed in the telephone book under U.S. Department of Agriculture. Information is also available on the Internet at the following World Wide Web sites: <http://www.nrcs.usda.gov> and <http://www.fsa.usda>.